Unusual Parallel Entanglement of Metal-Organic 2D Frameworks with Coexistence of Polyrotaxane, Polycatenane and Interdigitation

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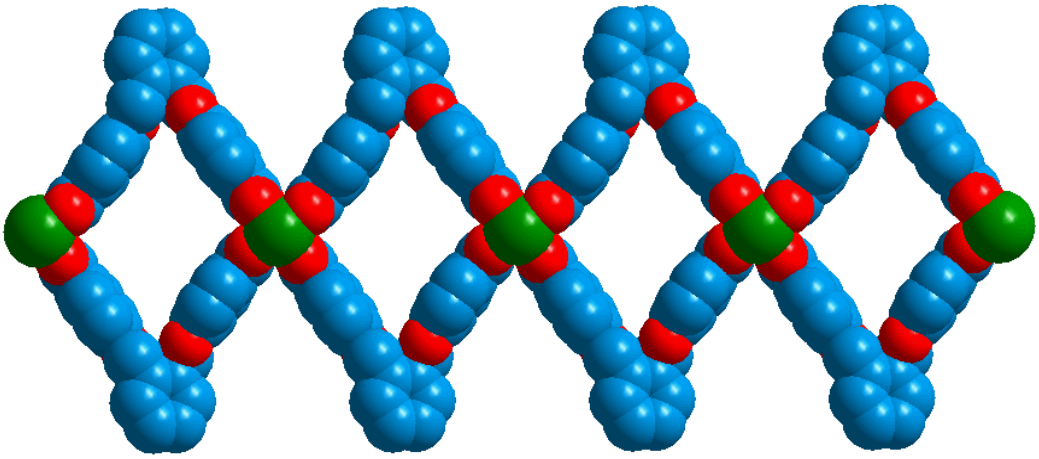

Figure S1 Space-filling plots of the neutral chain of loops $[Zn_2(1,2\text{-BBOMB})_2]_n$ in compplex **1**.

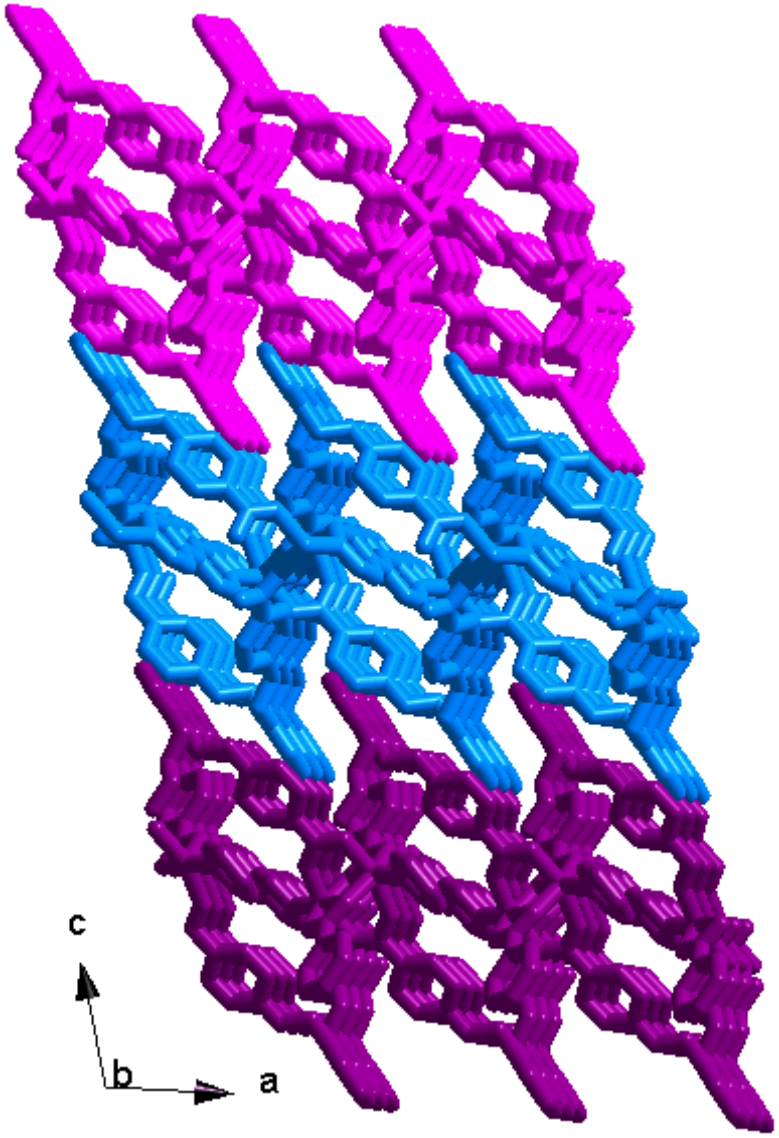

Figure S2 The adjacent layers are interdigitated each other to form 3D architecture in complex **1**.

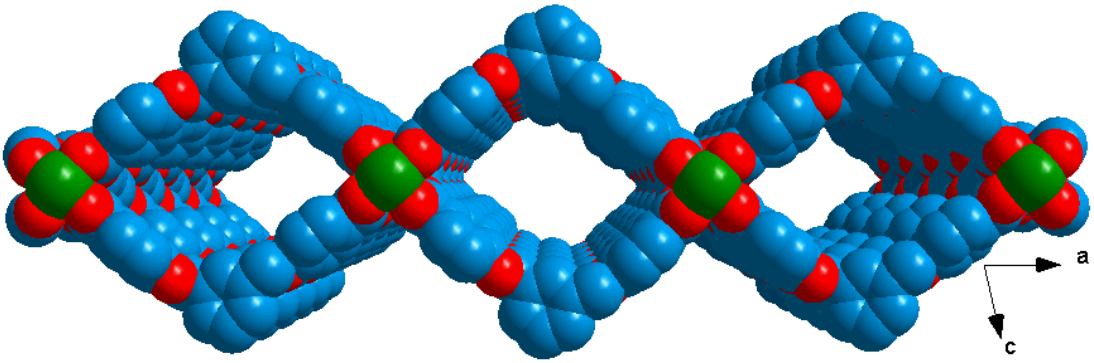

Figure S3 Space-filling plots of the single net in **2** viewed along the *b* axis.

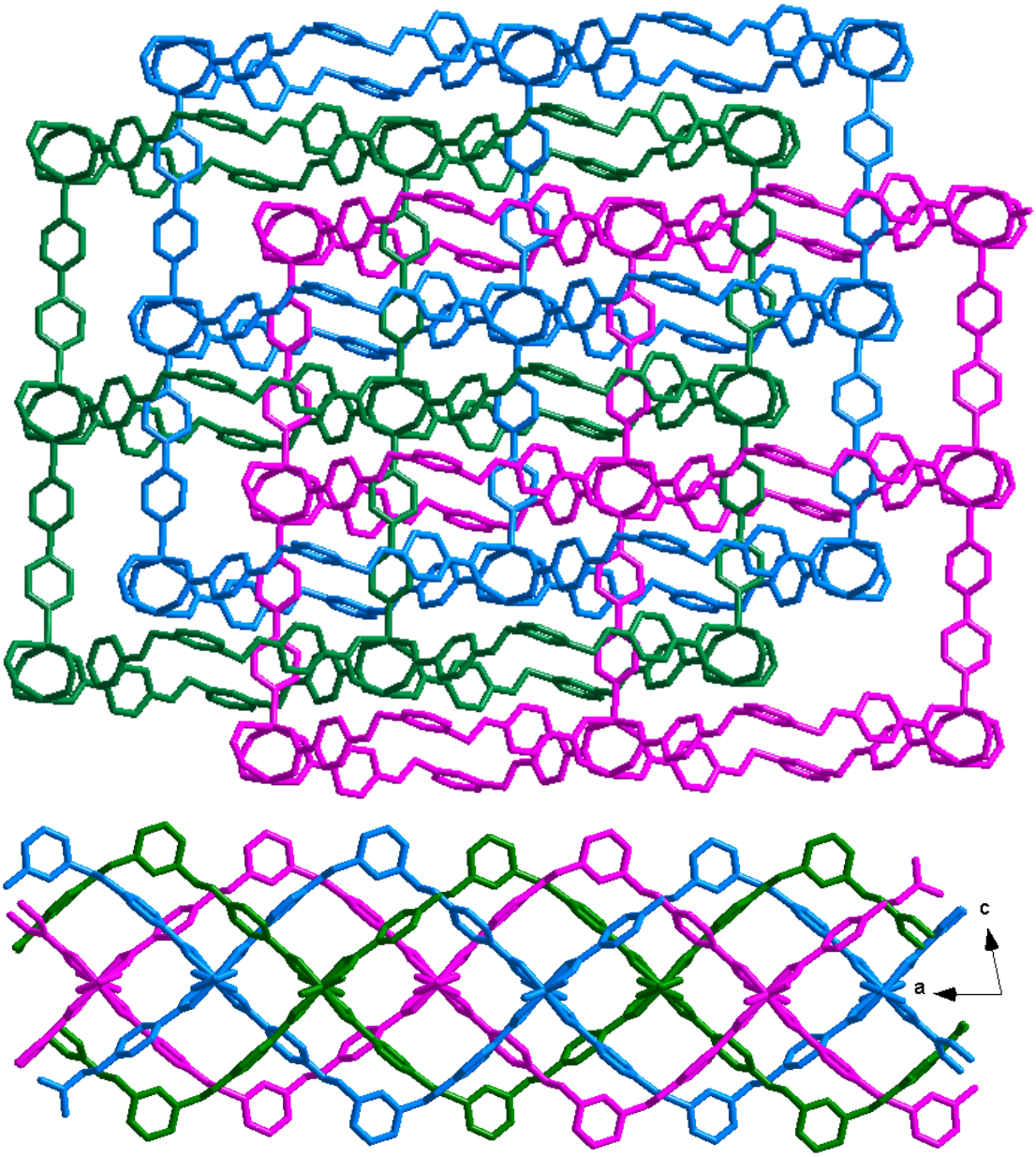

Figure S4 Two views of parallel 2D→2D triply interpenetrating nets in **2**

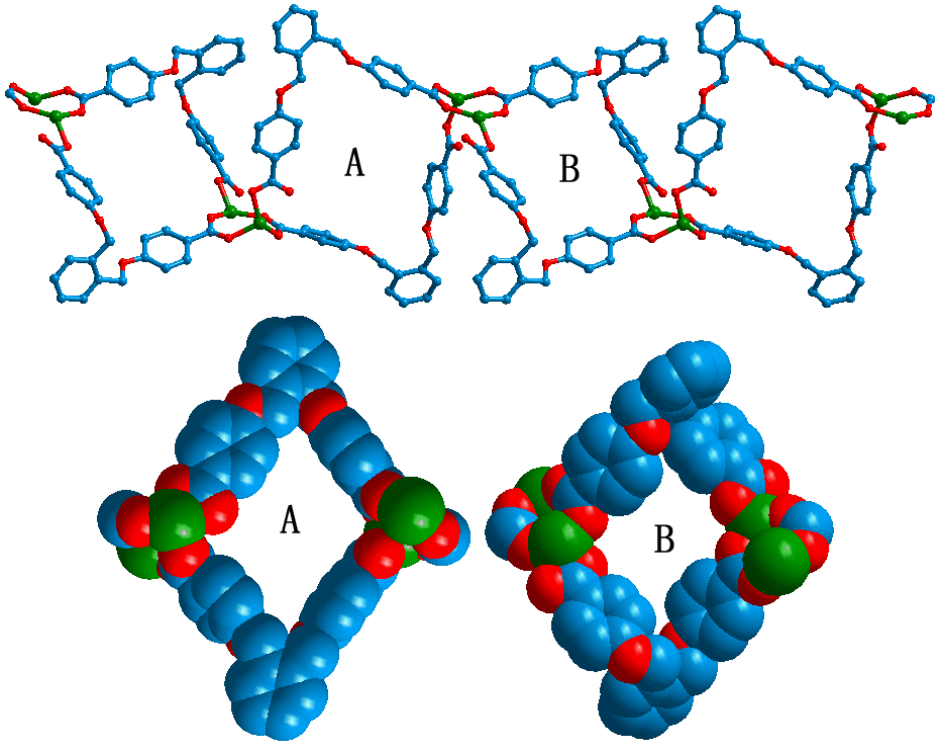

Figure S5 A view of the neutral chain of loops $[Zn_2(1,2\text{-BBOMB})_2]_n$ with two type rings in compplex **3**. Space-filling plots of type A and B loops in **3**.

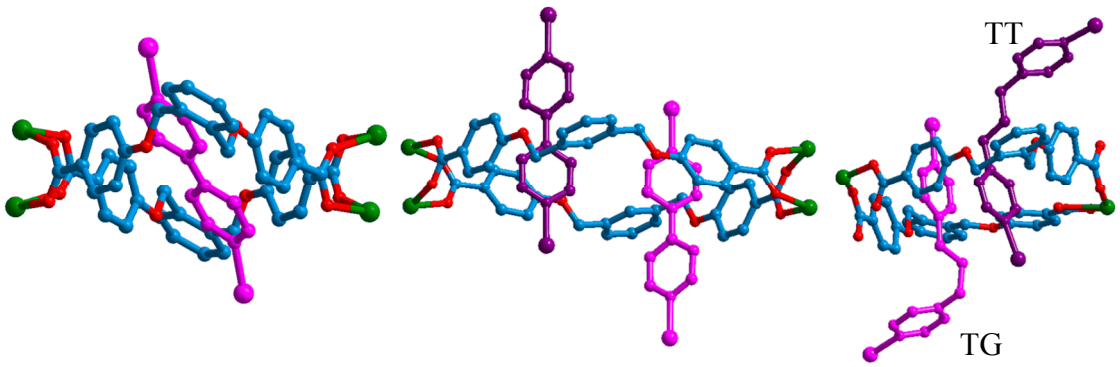

Figure S6 The comparison of the stereochemical relationships between the 4,4′-bipy or bpp rods and the $[Zn_2(BBOMB)_2]$ loops through which it passes for complexes **1** (left), **2** (middle) and **3** (right).

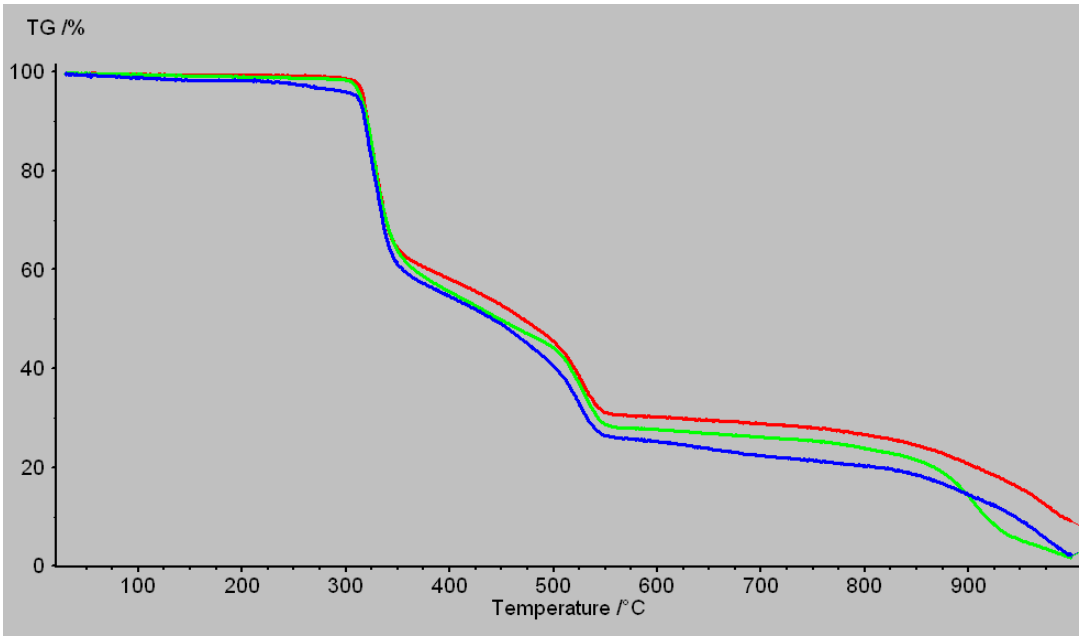

Figure S7 TGA curves for complexes **1** (red), **2** (blue) and **3** (green).